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# 21PCT170T4-0025 (21PCT170T4-R/X)

Hi-Eff Red/Blank

T1 (3mm) Right-Angle Bilevel PCB LEDs  
w/ Chamfered Upper Back  
45° Viewing Angle



DWG BY:  
GP  
06-30-21

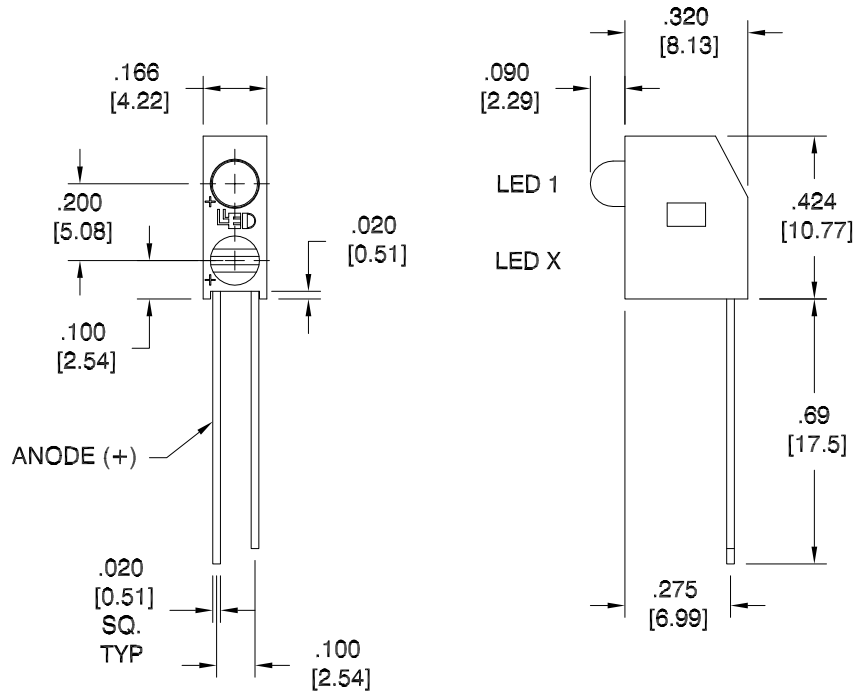
R&D:  
UF  
06-30-21

MFG:  
LD  
06-30-21

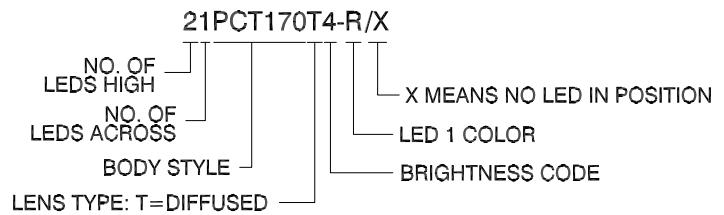
QA:  
SB  
06-30-21

REVISION LTR: -  
  
06-30-21

● **Dimensions:**



TOLERANCE PER ANSI-Y14.5  
(UNLESS OTHERWISE STATED)  
.XXX ± .010  
.XX ± .025  
ANGLES ± 0°,30'  
FRACT. ± 1/32



NOTES:

1. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
2. LED CHIP MATERIAL: GaAsP/GaP
3. LED EMITTED COLOR: HI-EFF. RED
4. LED LENS APPEARANCE: RED DIFFUSED
5. BASE MATERIAL: NYLON 66 (UL94V-2)
6. BASE COLOR: BLACK

● **Absolute Maximum Ratings(Ta=25°C)**



Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	80	mW
Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current* <sup>1</sup>	I <sub>FP</sub>	150	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature	Topr	-40°C~+85°C	
Storage Temperature	Tstg	-40°C~+85°C	

\*<sup>1</sup>Condition for I<sub>FP</sub> is pulse of 1/10 duty and 0.1msec width.

● **Electrical and Optical Characteristics(Ta=25°C)**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F=20mA$	-	2.0	2.6	V
Luminous Intensity	$I_v$	$I_F=20mA$	-	37	-	mcd
Reverse Current	$I_R$	$V_R=5V$	-	-	100	$\mu A$
Peak Wave Length	$\lambda_p$	$I_F=20mA$	-	648	-	nm
Dominant Wave Length	$\lambda_d$	$I_F=20mA$	625	632	638	nm
Spectral Line Half-width	$\Delta\lambda$	$I_F=20mA$	-	42	-	nm
Viewing Angle	$2\theta_{1/2}$	$I_F=20mA$	-	45	-	deg
Radiant Intensity		$I_F=20mA$	-	-	-	$\mu W/sr$
Chromaticity Coordinates	X	$I_F=20mA$	-	0.71	-	
	Y		-	0.29	-	

● **Typical electro-optical characteristics curves**

Fig.1 Relative intensity vs. Wavelength

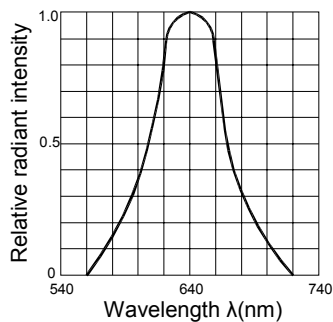


Fig.2 Forward current derating curve vs. Ambient temperature

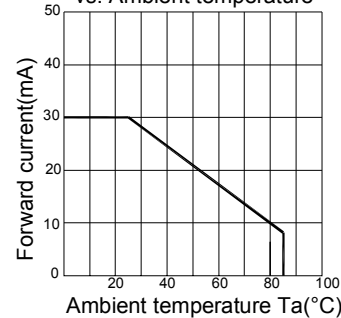


Fig.3 Forward current vs. Forward voltage

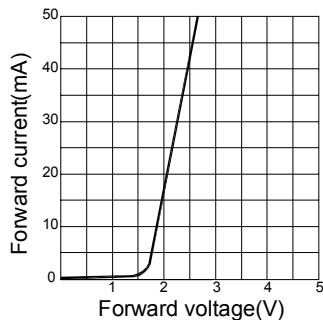


Fig.4 Relative luminous intensity vs. Ambient temperature

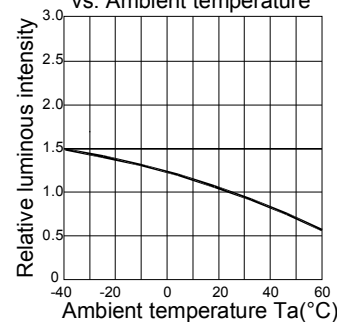


Fig.5 Relative luminous intensity vs. Forward current

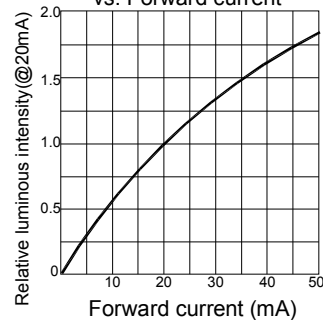
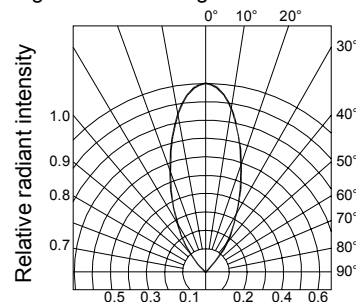
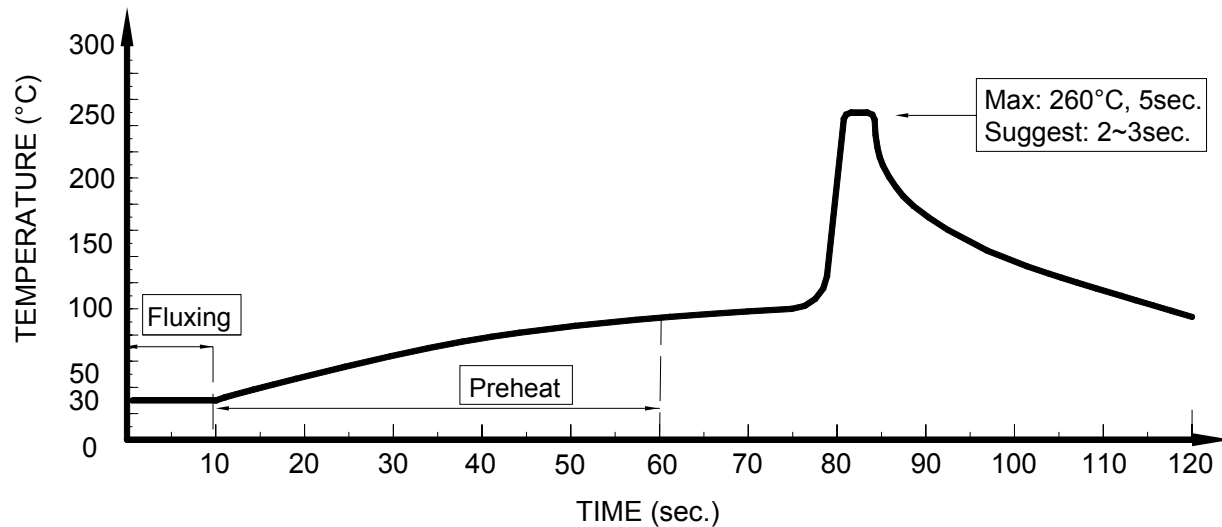


Fig.6 Radiation diagram



## ● Dip Soldering



1. Please avoid any external stress applied to the lead-frames and epoxy while the LEDs are at high temperature, especially during soldering.
2. DIP soldering and hand soldering should not be done more than one time.
3. After soldering, avoid the epoxy lens from mechanical shock or vibration until the LEDs are back to room temperature.
4. Avoid rapid cooling during temperature ramp-down process.
5. Although the soldering condition is recommended above, soldering at the lowest possible temperature is feasible for the LEDs

## ● IRON Soldering

A : Max : 350°C Within 3 sec. One time only.

B : For 3mm LED without flange, if the LED epoxy lays flat on the PCB, the welding condition is 350°C within 2 seconds, one time only.

